CLAIMS:

- 1. A kit, comprising arsenic trioxide and instructions for the administration of said arsenic trioxide to a patient diagnosed with acute promyelocytic leukemia, comprising delivering a therapeutically effective dosage amount of about 0.15 mg/kg of said arsenic trioxide for a maximum of 60 days or until bone marrow remission, which constitutes a first administration.
- 2. The kit of claim 1, further comprising instructions for a second administration of said arsenic trioxide, wherein said second administration comprises a therapeutically effective dosage amount of about 0.15 mg/kg of arsenic trioxide for 25 doses.
- 3. The kit of claim 2, wherein further comprising instructions wherein said second administration is administered 3 to 6 weeks after said first administration.
- 4. The kit of claim 3, further comprising instructions wherein said second administration is administered for up to five weeks.
- 5. The kit of claim 4, further comprising instructions wherein said second administration is administered at five doses per week.
- 6. The kit of claim 2, further comprising instructions for repeating said second administration.
- 7. The kit of claim 6, further comprising instructions wherein said second administration is repeated every 3 to 6 weeks.
- 8. The kit of claim 7, further comprising instructions wherein said second administration is repeated until a total of between two and ten cycles of said second administration are completed.
- 9. The kit of claim 8, further comprising instructions for repeating said second administration until a total of two cycles of said second administration are completed.

- 10. The kit of claim 8, further comprising instructions for repeating said second administration until a total of ten cycles of said second administration are completed.
- 11. A kit, comprising arsenic trioxide and instructions for the administration of said arsenic trioxide to a patient diagnosed with acute promyelocytic leukemia, comprising delivering a therapeutically effective dosage amount of about 0.15 of said arsenic trioxide once a day for a maximum of 60 days or until bone marrow remission, which constitutes a first administration.
- 12. The kit of claim 11, further comprising instructions for a second administration of said arsenic trioxide, wherein said second administration comprises a therapeutically effective dosage amount of about 0.15 mg/kg of arsenic trioxide once a day for 25 doses.
- 13. The kit of claim 12, wherein further comprising instructions wherein said second administration is administered 3 to 6 weeks after said first administration.
- 14. The kit of claim 13, further comprising instructions wherein said second administration is administered for up to five weeks.
- 15. The kit of claim 14, further comprising instructions wherein said second administration is administered at five doses per week.
- 16. The kit of claim 12, further comprising instructions for repeating said second administration.
- 17. The kit of claim 16, further comprising instructions wherein said second administration is repeated every 3 to 6 weeks.
- 18. The kit of claim 17, further comprising instructions wherein said second administration is repeated until a total of between two and ten cycles of said second administration are completed.

- 19. The kit of claim 18, further comprising instructions for repeating said second administration until a total of two cycles of said second administration are completed.
- 20. The kit of claim 18, further comprising instructions for repeating said second administration until a total of ten cycles of said second administration are completed.